



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D206-642-341BL
Job Sheet 192085



Part No: D206-642-341BL

Job Qty: 1 pcs

Part Name: Replacement Skidtube (Fits LH or RH)



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 3/15/19

Job Tracking No:

Due Date: 4/19/19

Created By: Marie Lajeunesse

Type: SOLD

Description: ~~order 192085~~

Note: DWG D2650 REV:F(DEO) IPP Rev: H 05.10.11 Added D3429-1 per CHG004 KJ/CP/JLM IPP Rev:I 08-09-29 revF as per dwg DD verified by:EC Est Rev:J 09-03-02 as per DSI9440 rev.a DD verified by:EC IPP rev K 10.08.03 chg ms27039-1-08 for "C" type EC verf:DD IPP Rev:L 12.11.22 now swage per ecn12-679 DD verf:JLM IPP Rev:M 14.04.25 ECN14-520 DD verf:JLM IPP REV:N 15.10.09 ADDED BL DD VERF:JLM IPP REV:O 16.01.22 PAR16-484 DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
110	Skidtubes - 1	1 pcs	4/19/19		0.00	1.58	Skidtubes - 1		
							Skidtubes - 2		
							Skidtubes - 3		
							Skidtubes - 4		
							Skidtubes - 5		TE
							Skidtubes - 6		BE
							Skidtubes - 7		
115	QC 5	1 pcs	4/19/19		0.00	0.00	QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 42		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		
							QC 5 - 58		
							QC 5 - 68		
							QC 5 - 9		PD 19.04.01
							QC 5 - 50		
							QC 5 - 30		
							QC 5 - 40		
116	QC 9	1 pcs	4/19/19		0.00	0.00	QC 9 - 10		
							QC 9 - 18		
							QC 9 - 24		



Dart Aerospace Ltd.
1270 Aberdeen Street
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CANADA
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Container No: S165244



Part: D206-642-341BL

Job No: 192085

Serial No/Batch: S165244

Revision: F(deo)

Inspector:

Exp Date:

Instructions: FAA STC SA00475SE 18/10/17, TC STC SH98-4 Issue 2, EASA STC

120 Handfinish - 1-1 Chemical-B4B	1 pcs	4/19/19	0.00 1.17	QC 9 - 43	
				QC 9 - 50	
				QC 9 - 9	PD 19/04/01
				Handfinish - 1 - 1 - B4B	
				Handfinish - 1 - 2 - B4B	
				Handfinish - 1 - 3 - B4B	
				Handfinish - 1 - 4 - B4B	
				Handfinish - 1 - 5 - B4B	
				Handfinish - 1 - 6 - B4B	
				Handfinish - 1 - 7 - B4B	
				Handfinish - 1 - 8 - B4B	
				Handfinish - 1 - 9 - B4B	
				Handfinish - 1 - 10 - B4B	DR 19/04/03
				Handfinish - 1 - 11 - B4B	
				Handfinish - 1 - 12 - B4B	
				Handfinish - 1 - 13 - B4B	
				Handfinish - 1 - 14 - B4B	
				Handfinish - 1 - 15 - B4B	
				Handfinish - 1 - 16 - B4B	
				Handfinish - 1 - 17 - B4B	
				Handfinish - 1 - 18 - B4B	
				Handfinish - 1 - 19 - B4B	
				Handfinish - 1 - 20 - B4B	
				Handfinish - 1 - 21 - B4B	
				Handfinish - 1 - 22 - B4B	
125 QC 7	1 pcs	4/19/19	0.00 0.00	QC 7 - 10	
				QC 7 - 13	
				QC 7 - 14	
				QC 7 - 15	
				QC 7 - 17	
				QC 7 - 18	
				QC 7 - 19	
				QC 7 - 2	
				QC 7 - 28	
				QC 7 - 3	
				QC 7 - 30	
				QC 7 - 34	
				QC 7 - 36	
				QC 7 - 37	
				QC 7 - 41	
				QC 7 - 47	
				QC 7 - 48	
				QC 7 - 51	
				QC 7 - 58	
				QC 7 - 59	
				QC 7 - 60	
				QC 7 - 9	
				QC 7 - 68	

130 Skidtubes - 2 - B4B	1 pcs	4/19/19	0.00 1.58	QC 7 - 50	
				QC 7 - 67	
				QC 7 - 40	
				Skidtubes - 1 - B4B	
				Skidtubes - 2 - B4B	
				Skidtubes - 3 - B4B	
				Skidtubes - 4 - B4B	
140 QC 5	1 pcs	4/19/19	0.00 0.00	Skidtubes - 5 - B4B	
				Skidtubes - 6 - B4B	NW
				Skidtubes - 7 - B4B	
				QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	BE
150 Skidtubes - 3 - B4B	1 pcs	4/19/19	0.00 1.58	QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 42	
				QC 5 - 43	
				QC 5 - 49	
180 QC 5	1 pcs	4/19/19	0.00 0.00	QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	
				QC 5 - 50	
				QC 5 - 30	
				QC 5 - 40	
190 Handfinish - 2-1 Pressure-B4B	1 pcs	4/19/19	0.00 1.17	Skidtubes - 1 - B4B	
				Skidtubes - 2 - B4B	
				Skidtubes - 3 - B4B	
				Skidtubes - 4 - B4B	TF
				Skidtubes - 5 - B4B	
				Skidtubes - 6 - B4B	
				Skidtubes - 7 - B4B	
200 Outsource - 11 - Paint	1 pcs	4/19/19		QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
201 spray paint	1 pcs	4/19/19		QC 5 - 3	
				QC 5 - 42	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
200 Outsource - 11 - Paint	1 pcs	4/19/19		QC 5 - 9	
				QC 5 - 50	
				QC 5 - 30	
				QC 5 - 40	
				Handfinish - 2 - 1 - B4B	
				Handfinish - 2 - 2 - B4B	
				Handfinish - 2 - 3 - B4B	
200 Outsource - 11 - Paint	1 pcs	4/19/19		Handfinish - 2 - 4 - B4B	
				ATE003-VC	3

DAS
APR 12 2019 68
9-89

D.R. 19/04/15

205 QC 6	1 pcs	4/19/19	0.00 0.00	QC 6 - 42	
				QC 6 - 9	
				QC 6 - 68	
				QC 6 - 61	
210 QC 14	1 pcs	4/19/19	0.00 0.00	QC 14 - 15	
				QC 14 - 2	
				QC 14 - 34	
				QC 14 - 41	
				QC 14 - 51	
				QC 14 - 58	
				QC 14 - 59	BEB
				QC 14 - 9	
				QC 14 - 68	
				QC 14 - 40	
				QC 14 - 19	
220 Handfinish - 4-1-Assembly-B4B	1 pcs	4/19/19	0.00 1.17	Handfinish - 4 - 1 - B4B	11 19-1-27
				Handfinish - 4 - 10 - B4B	
				Handfinish - 4 - 11 - B4B	
				Handfinish - 4 - 12 - B4B	
				Handfinish - 4 - 13 - B4B	
				Handfinish - 4 - 14 - B4B	
				Handfinish - 4 - 15 - B4B	
				Handfinish - 4 - 2 - B4B	
				Handfinish - 4 - 3 - B4B	
				Handfinish - 4 - 4 - B4B	
				Handfinish - 4 - 5 - B4B	
				Handfinish - 4 - 6 - B4B	
				Handfinish - 4 - 7 - B4B	
				Handfinish - 4 - 8 - B4B	
				Handfinish - 4 - 9 - B4B	
230 QC 3	1 pcs	4/19/19	0.00 0.00	QC 3 - 10	
				QC 3 - 13	
				QC 3 - 15	
				QC 3 - 17	
				QC 3 - 18	
				QC 3 - 2	
				QC 3 - 28	
				QC 3 - 3	
				QC 3 - 30	
				QC 3 - 34	
				QC 3 - 36	
				QC 3 - 41	
				QC 3 - 51	
				QC 3 - 58	
				QC 3 - 59	
				QC 3 - 68	
				QC 3 - 9	
				QC 3 - 40	
				QC 3 - 19	
240 QC 5	1 pcs	4/19/19	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	

					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 42	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	DAS APR 26 2019 68
					QC 5 - 9	9-89
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	
250	Packaging 3-1 - Stock - B4B	1	4/19/19	0.00 0.00	Packaging 3 - 1 - B4B	
	pcs				Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	
					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	
					Packaging 3 - 27 - B4B	
					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	DAS 21
					Packaging 3 - 34 - B4B	9-89
					Packaging 3 - 35 - B4B	APR 26 2019
					Packaging 3 - 36 - B4B	
255	DC - 1 - B4B	1	4/19/19	0.00 0.00	DC - 1 - B4B	DAS
	pcs				DC - 2 - B4B	21
						APR 26 2019
260	QC 21 - FG	1	4/19/19	0.00 0.00	QC 21 - FG - 21	9-89
	pcs				QC 21 - FG - 70	
					QC 21 - FG - 53	DAS 21
						APR 26 2019

Part Op 110 - Skidtubes 1-Deburr Fwd edge of tube 2-Scribe "Identify Batch Number" 3-Remove ridge on inside of Fwd edge of Descriptions: tubeas per Dwg D2650, 4-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required. A/R Aluminum Rod 138989 5-Grind weld flush to cap on top surface only. 6-Cut aft end to length as per dwg D2650 7-Drill pilot holes using drill Jig DT8168A (A, & B) and DT8025. 8-Drill holes for wearplates using DT 8028-5. Open to Ø 0.297". 9-Open Aft Cap Hole using #6 Drill Bit 10-Open holes for Tow Ring to Ø0.625" as per Dwg D2650, D2650-5 Drilling Detail 11-Remove inner indexing ridge on aft end of skidtubeas per Dwg D2650 12- Ream holes to finished size

as per Dwg D2650, D2650-5 Drilling Detail (without cutting fluid) 13-Deburr.

115 - QC5- Inspect part completeness to step on W/O

116 - QC9- Inspect visual per QSI004- Fusion Welds

120 - Chemical Conversion Coat per QSI005 4.1

125 - QC7-Inspect Chemical Conversion Coat

130 - Skidtubes - 1- Bond D2654-5 web in place as per QSI 015 Ensure holes line up Allow 12 Hrs. cure time before cutting Start Date: 19-4-9 Time: 11:00 AM Finish Date: 19-04-09 Time: 11:00 PM A/R Sikaflex-291Sikaflex expiry date: 19-4-23

140 - QC5- Inspect part completeness to step on W/O

150 - Skidtubes - 1- Insert D4720-1 Spacer. Swage to 0.313" X 0.75" DP per QSI 002. Trim and grind flush per QSI 002

180 - QC5- Inspect part completeness to step on W/O

190 - Pressure Wash per QSI005 4.3/ Clean and remove all markings

200 - ISSUE PO _____ Prime and Paint DELFLEET BLUE Primer S171377/Blue 8150229/clear S173359

205 - QC6- All purchased or subcontracted products

210 - QC14- Inspect Spray Paint

220 - HandFinish4 (Assemble as per dwg - 1-Install inserts & wearpads as per dwg D2922. Use a drop of Sikaflex inside insert holes before installing wearpad/wearplate. A/R Sikaflex-291 5138473 Sikaflex expiry date: 19/05 2-

Install O-Rings D2651-3 on plugs D2651-1 with Petroleum Jelly and install plugs as per Dwg D2650. Clean excess

adhesive 3-Install MS27039-4-06 Screw 4-Inspect for foreign object per QSI 024 5-Install D2646 Aft Cap and seal with

SikaflexClean excess adhesive A/R Sikaflex-291 5138473 Sikaflex expiry date: 19/05 6- Install D2680-041Nut Plate as per Dwg D2650 7-Wing Walk as per Dwg D2650-5 and QSI 005 4.4 Batch: 5163430

230 - QC3- Inspect Part Finish

240 - QC5- Inspect part completeness to step on W/O

250 - Identify and pack for shipping as per PPP D206-642-341 Location:FG083

255 - Document Control - Photocopy bluefile and create labels per PPP D206-642-341 CHG005

260 - QC21- Final Inspection - Work Order Release

Job BOM

Pårt / Item	Component Name	Quantity	Operation	Container
D2620	Skidtube, 206 Skidtube	1 pcs (1 ea)	110-Skidtubes - 1	5150650
D2647	Cap	1 pcs (1 ea)	110-Skidtubes - 1	5089985
D2654-5	Web	1 pcs (1 ea)	130-Skidtubes - 2 - B4B	514179
D4720-1	Spacer	21 40 pcs (19 ea)	150-Skidtubes - 3 - B4B	5134519
ALS4-1032-130	Rivnut	54 Ea (54 ea)	220-Handfinish - 4-1-Assembly-B4B	5057257
CCR264SS3-3	Cherry Rivet	2 Ea (2 ea)	220-Handfinish - 4-1-Assembly-B4B	FM137622
CR3212-4-03	Cherry Rivet	2 Ea (2 ea)	220-Handfinish - 4-1-Assembly-B4B	FM137886-0
D2646BL	Aft Cap	1 pcs (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5131826
D2651-1BL	Plug	14 pcs (14 ea)	220-Handfinish - 4-1-Assembly-B4B	5013409
D2651-3	O-Ring	14 pcs (14 ea)	220-Handfinish - 4-1-Assembly-B4B	7x 5027453/504450 2x7
D2680-041BL	Nut Plate	1 pcs (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5013112
D3537-1	Wearpad	6 pcs (6 ea)	220-Handfinish - 4-1-Assembly-B4B	5171270
D3537-3	Wearpad	1 pcs (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5114665
D4956-11	Wearplate Fwd	1 pcs (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5037779
D4956-23	Wearplate Center Fwd	1 pcs (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5076889
D4956-35	Wearplate Aft	1 pcs (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5172570
MS27039-1-08	Screw	2 Ea (2 ea)	220-Handfinish - 4-1-Assembly-B4B	5133202-1
MS27039-4-06	Screw	1 Ea (1 ea)	220-Handfinish - 4-1-Assembly-B4B	FM137951-1
MS27039C1-08	Screw	54 Ea (54 ea)	220-Handfinish - 4-1-Assembly-B4B	5167302
NAS1149C0332R	Washer	54 Ea (54 ea)	220-Handfinish - 4-1-Assembly-B4B	5148669
NAS1149D0332J	Washer	2 Ea (2 ea)	220-Handfinish - 4-1-Assembly-B4B	5123446
NAS1149D0463J	Washer	1 Ea (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5055952

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
110-Skidtubes - 1	D2620	1	10	0
	D2647	1	8	0
130-Skidtubes - 2 - B4B	D2654-5	1	11	0
150-Skidtubes - 3 - B4B	D4720-1	19	383	0
220-Handfinish - 4-1-Assembly-B4B	ALS4-1032-130	54	9,221	0
	CCR264SS3-3	2	243	0
	CR3212-4-03	2	120	0
	D2646BL	1	5	0
	D2651-1BL	14	54	0
	D2651-3	14	382	0
	D2680-041BL	1	0	0
	D3537-1	6	45	0
	D3537-3	1	22	0
	D4956-11	1	11	0
	D4956-23	1	6	0
	D4956-35	1	1	0
	MS27039-1-08	2	546	0
	MS27039-4-06	1	13	0
	MS27039C1-08	54	420	0
	NAS1149C0332R	54	5,103	0
	NAS1149D0332J	2	2,991	0
	NAS1149D0463J	1	6,901	0
Part Specifications				
Specifications could not be found.				

Plex 3/15/19 1:36 PM Dart.lajeunesse.marie

QTY -1	QTY -3	QTY -5	QTY -7	PART NUMBER	DESCRIPTION
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
	1			D2654-3	WEB
		1		D2654-5	WEB
			1	D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
17	18	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN960JD10L	WASHER
2	2	2	2	CCR264SS3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN960JD416	WASHER
52	52			CR3212-4-04	RIVET

F

SHOP COPY
RETURN TO
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 192085 MLJ

19-03-15

DEO ATTACHED

RELEASED
08-07-23

NOTES:

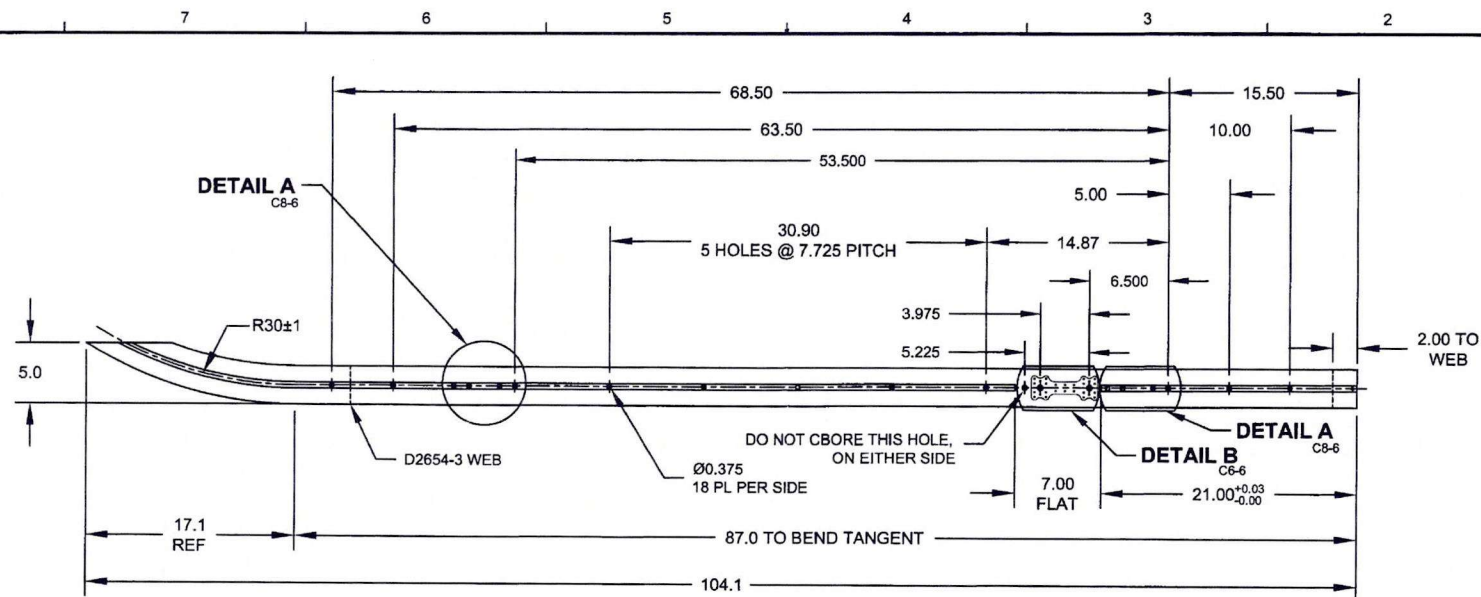
- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 11) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- 12) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- 13) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

F	DRAWING UPDATED TO CURRENT STANDARDS. SHT 6 ADDED. ALL SECTION AND DETAIL VIEWS TRANSFERRED TO SHT 6. SHT 1 IN PL PART D2649 QTY UPDATED. SHT 6 SECT C-C GRIND INSTRUCTIONS DELETED FROM NOTE 7 (SEE NCR 239).	AJS	08.08.08
E	RMOVE CBORE, CHG DRILL, ADD CHAMFER	CP	06.03.30
D	REDRAW: INCCRP. DE09136/9153/9163 MOD GROUND HANDLING ON D2650-1/-3	CP	04.05.17
C	CHANGE HOLE PATTERN AND FRONT END	DS	97.10.29
B	AS MANUFACTURED CHANGES	DS	97.06.26
A	NEW ISSUE	DS	97.03.25
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 1 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
DATE	08.08.08	COPYRIGHT © 1987 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

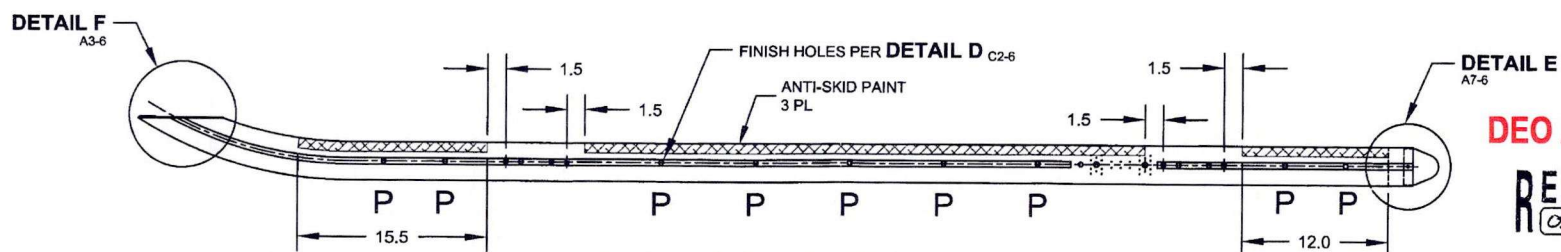


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880922/114

DESIGN	DS	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. F
MFG. APPR.	<i>[Signature]</i>	D2650	SHEET 2 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	206/407 SKIDTUBE ASSEMBLIES	NTS
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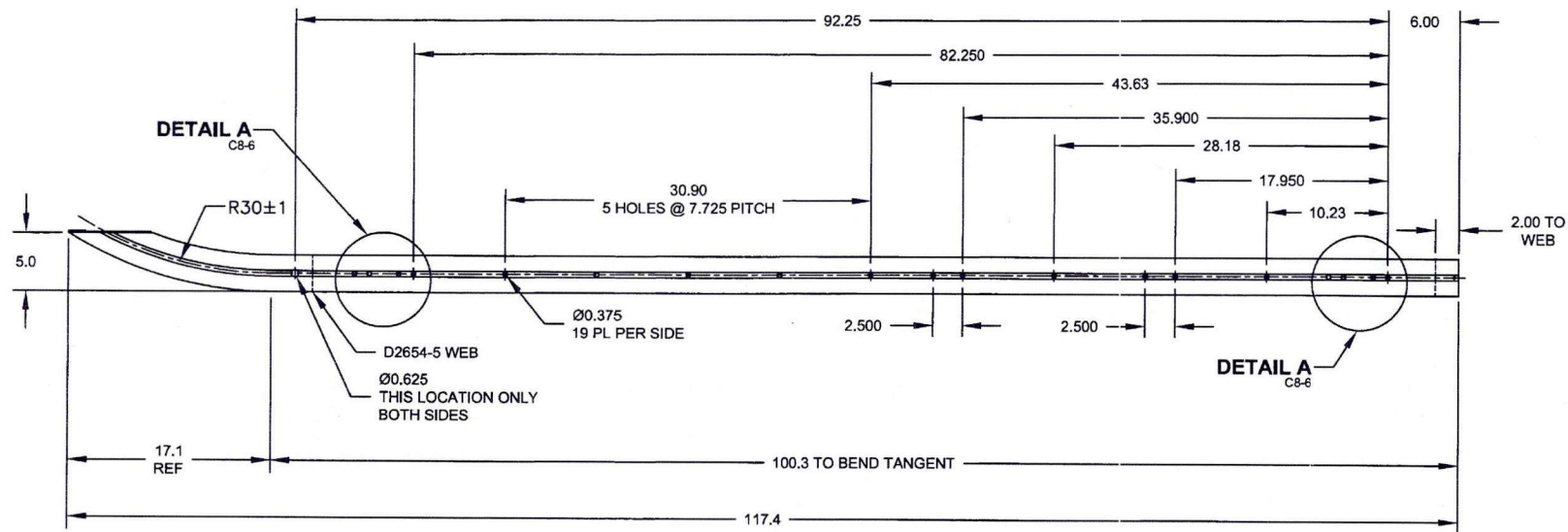
D2650-3 BENDING/DRILLING DETAIL



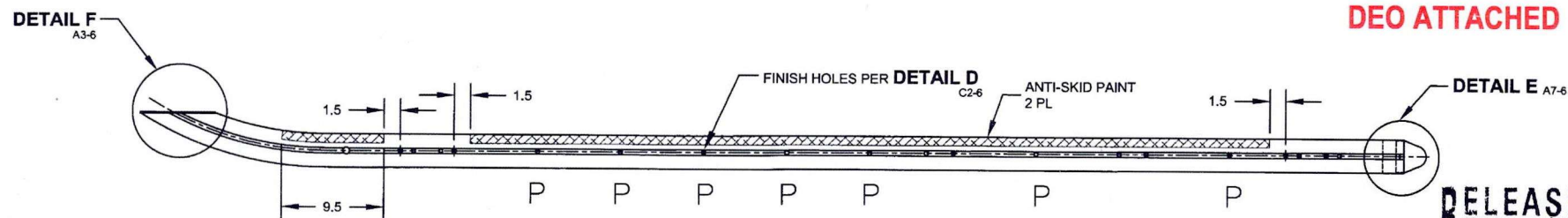
D2650-3 ASSEMBLY/FINISHING DETAIL

DEO ATTACHED
RELEASED
08 07 22 1114

DESIGN	DS	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 3 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
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D2650-5 BENDING/DRILLING DETAIL

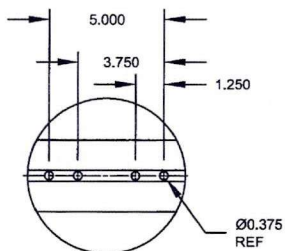


D2650-5 ASSEMBLY/FINISHING DETAIL

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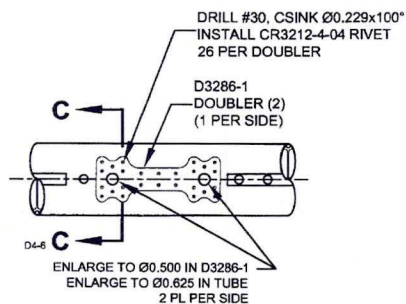
RELEASED
08.09.22/117

DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 4 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
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DETAIL A
SCALE 2X

C2-2
D7-2
C2-3
D7-3
C2-4
D7-4
C2-5
D8-5



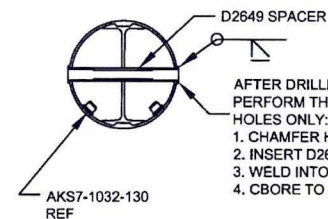
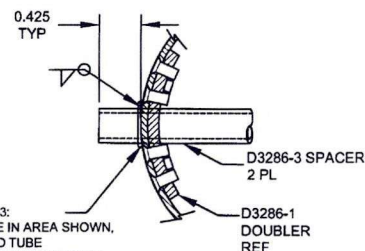
DETAIL B
SCALE 2X

C3-2
C3-3

- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.030x45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE.



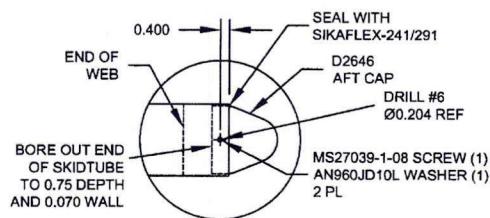
SECTION C-C C7-6
SCALE NONE



DETAIL D
FOR Ø0.375 HOLES ONLY
SCALE 3X

B4-2
B4-3
B4-4
B4-5

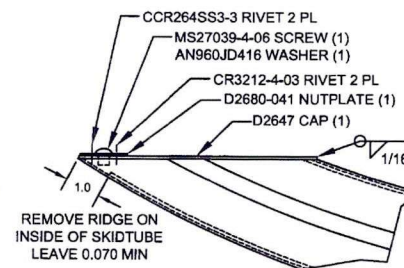
- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.030 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORE TO Ø0.313 X 0.75 DP



DETAIL E
SCALE 2X

B2-2
B2-3
B1-4
B1-5

ORIENTATION OF
D2680-041



DETAIL F
SCALE NONE

B8-2
B8-3
B8-4
B8-5

- DETAIL F NOTES:**
1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D2647 (TRIM AS NECESSARY)
 4. WELD D2647 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D2680-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH

RELEASED
05-19-22-18

DEO ATTACHED

DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 6 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
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DRAWING NO. D2650	TITLE 206/407 SKIDTUBE ASSEMBLIES	REV. F	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D2650-F-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>[Signature]</i>	CHECKED A.P.	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>		DE APPR. <i>[Signature]</i>		
DATE 12.10.12	DATE 12.10.22	DATE 12.10.22	DATE 12.10.22		DATE 12.10.22		

PURPOSE:

CHANGE C'BORED WELDED CROSSBOLT SPACERS TO SWAGED SPACERS

CHANGE:

PARTS LIST IS AMENDED AS FOLLOWS:

IS:

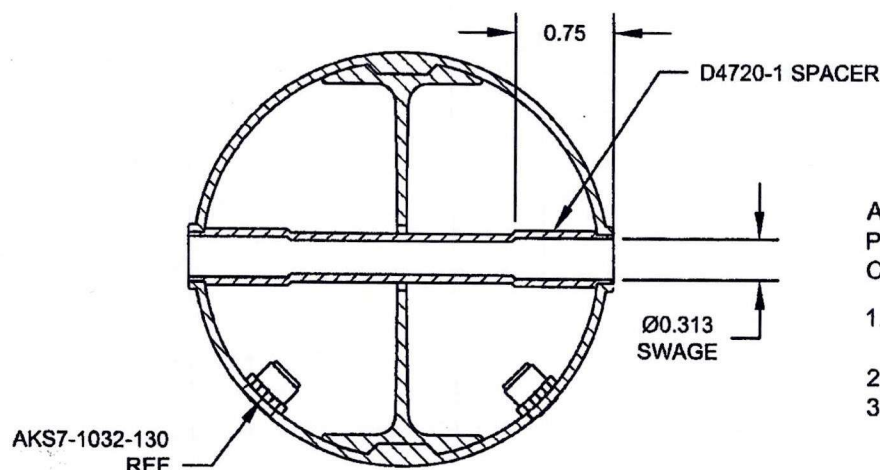
QTY	QTY	QTY	QTY	PART NUMBER	DESCRIPTION
-1	-3	-5	-7		
1	1	0	0	D2649	CROSS BOLT SPACER
16	17	19	23	D4720-1	SPACER

WAS:

17	18	19	23	D2649	CROSS BOLT SPACER
----	----	----	----	-------	-------------------

ADD DETAIL G BELOW, WHICH IS THE SAME SECTION VIEW AS DETAIL D OF DWG.

C'BORED HOLES ARE NOW SWAGED PER DETAIL G BELOW. FOR THE Ø0.375 HOLE THAT IS NOT C'BORED, WELD PER DETAIL D OF DWG (SEE AMENDED DETAIL B FOR REFERENCE).

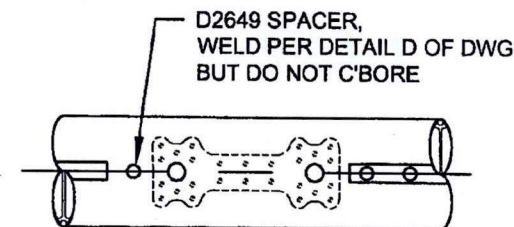


DETAIL G

FOR Ø0.375 HOLES ONLY

FOR HOLES THAT ARE CURRENTLY C'BORED ONLY

NOT TO SCALE



DETAIL B

AMENDMENT TO DETAIL B
NOT TO SCALE

RELEASED
2012-11-16
[Signature]

AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.375 HOLES THAT ARE
CURRENTLY C'BORED:

1. INSERT D4720-1 SPACER, 16 PL (-1) OR 17 PL (-3)
OR 19 PL (-5) OR 23 PL (-7)
2. SWAGE TO Ø0.313 X 0.75 DP PER QSI 002
3. TRIM / GRIND FLUSH PER QSI 002

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No.

Route update only ☐

Job: <u>192085</u> Part No: <u>D206-642-341R</u>		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid tube ☒ Cross tube ☐ Eng. (Non-AW) ☐ Engineering ☒ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Water Jet ☐ Large Fab ☐ Finishing ☐ Rec/Store/Packaging ☐ Supplier ☐ Quality ☐																															
Date: <u>19/3/21</u>		Sequence #: <u>110</u>		QTY Affected: <u>1</u>		MRB (QSI042) INSP <u>12</u> <u>19/3/21</u>																													
Description Work Order Deviation Dwg calls for $\phi 0.625$ TOW RING HOLE.				Disposition DRILL TOW RING HOLE $\phi 0.640$ Ref. dwg D3274 Rev. G. <u>19/3/21</u>				Completed By <u>19/3/21</u>																											
				Lead hand / Supervisor <u>19-7-22</u>																															
				QC / QA Coordinator <u>68</u> 9-89 JUL 22 2019																															
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☒ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY <table border="0"> <tr> <td>☐ Pressure/Forced</td> <td>☐ Contamination</td> <td>☐ Power Loss/Surge</td> <td>☐ Positioned Wrong</td> </tr> <tr> <td>☐ Bending</td> <td>☐ Misaligned/off center</td> <td>☐ Folio/Program</td> <td>☐ Outside Tolerance</td> </tr> <tr> <td>☐ Crushing</td> <td>☐ BOM/Route</td> <td>☐ Grain Direction</td> <td>☒ Drawing</td> </tr> <tr> <td>☐ Cracks</td> <td>☐ Broken/Damage/Defect</td> <td>☐ Weld</td> <td>☐ Finish</td> </tr> <tr> <td>☐ Crimp/Kink/Ripple/Wave/Twist</td> <td>☐ Incomplete/Unclear Instructions</td> <td>☐ Wrong Stock Pulled</td> <td>☐ Part Lost/Missing</td> </tr> <tr> <td>☐ Marks/Chatter</td> <td>☐ Drill Holes</td> <td>☐ Out of Sequence</td> <td>☐ Misread</td> </tr> <tr> <td>☐ Mislabeled</td> <td>☐ Fit/Function</td> <td>☐ Off-set/Set-up</td> <td></td> </tr> </table>						☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Misaligned/off center	☐ Folio/Program	☐ Outside Tolerance	☐ Crushing	☐ BOM/Route	☐ Grain Direction	☒ Drawing	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish	☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Marks/Chatter	☐ Drill Holes	☐ Out of Sequence	☐ Misread	☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up	
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